



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



Publication number: **0 537 761 A3**

(12)

## EUROPEAN PATENT APPLICATION

(21) Application number: 92117711.9

(51) Int. Cl.<sup>5</sup> **C12M 1/40, C12Q 1/26,  
G01N 27/327**

(22) Date of filing: 16.10.92

(30) Priority: 18.10.91 JP 270839/91  
21.10.91 JP 272293/91  
09.04.92 JP 88507/92

(43) Date of publication of application:  
21.04.93 Bulletin 93/16

(94) Designated Contracting States:  
DE FR GB

(96) Date of deferred publication of the search report:  
02.02.94 Bulletin 94/05

(71) Applicant: **MATSUSHITA ELECTRIC  
INDUSTRIAL CO., LTD.**

1006, Ohaza Kadoma  
Kadoma-shi, Osaka 571(JP)

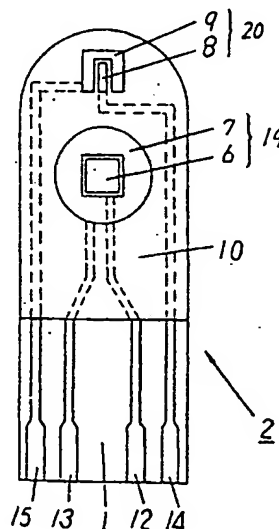
(72) Inventor: Yoshioka, Toshihiko  
4-15-11-302, Shinmori,  
Asahi-ku  
Osaka-shi, Osaka(JP)  
Inventor: Nankai, Shiro  
4-50-12, Nasuzukuri  
Hirakata-shi, Osaka(JP)

(74) Representative: Marx, Lothar, Dr.  
Patentanwälte Schwabe, Sandmair, Marx  
Stuntzstrasse 16  
D-81677 München (DE)

(54) **A biosensor and a method for measuring a concentration of a substrate in a sample.**

(57) The present invention provides a biosensor comprising an electrical insulating substrate, a main electrode system formed on the substrate and having a working electrode and a counter electrode, a reaction layer provided in contact with or in the vicinity of the main electrode system and containing an oxidoreductase, and a sub electrode system as a reference provided with an interval from the main electrode system and having a working electrode and a counter electrode.

Fig. 1



EP 0 537 761 A3



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 92 11 7711

9

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
A	EP-A-0 127 958 (GENETICS INTERNATIONAL, INC.) ---		C12M1/40 C12Q1/26 G01N27/327
A	EP-A-0 359 831 (MATSUSHITA ELECTRIC INDUSTRIAL CO.) ---		
D, P, A	EP-A-0 502 504 (MATSUSHITA ELECTRIC INDUSTRIAL CO; LTD.) -----		
			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
			C12Q
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 6 December 1993	Examiner Cartagena y Abella, P
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			